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Process and device for the parallel preparation of at least 4n oligonucleotides

The present invention relates to a process and a device for the parallel preparation of at least 4n oligonucleotides.

DE 42 06 488 A1 discloses a process and a device for the preparation of oligonucleotides. The known device has four bars one above the other, the contact surfaces of which are worked by grinding and polishing such that the bars can be displaced relative to one another without a gap. One of the bars contains reactions spaces which can be filled and emptied via entry and exit lines in the other bars. The individual reaction spaces are filled successively with reagents. In order for the said contact surfaces of the displaceable bars to be sealed well with respect to one another, very precise working of these contact surfaces is necessary and the bars must be made of wear-resistant material, for example of stainless steel or of particular glass materials.

The demand for oligonucleotides is increasing constantly and there is therefore the desire to prepare the highest possible number of oligonucleotides inexpensively, in a short time and with a high quality. The oligonucleotides here can be the same or different.

The invention is therefore based on the object of providing an improved process and an improved device for the preparation of oligonucleotides which takes into account the abovementioned desire.

This object is achieved according to the invention by the process described in patent claim 1 for the parallel preparation of at least 4n oligonucleotides. In the process according to the invention, at least four inserts each with n reaction vessels ($n \geq 1$) are arranged on or in a plate such that a first insert is at a first station, a